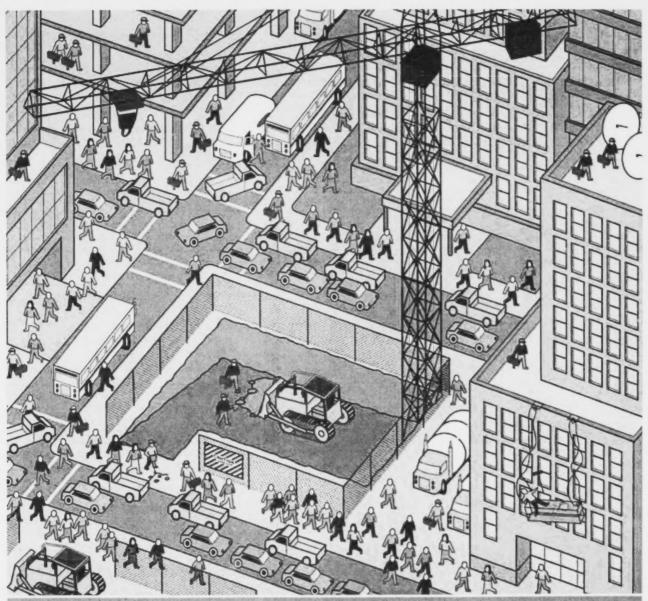
OCCUPATIONAL

SEPTEMBER 2007

HEALTH & SAFETY

TOO BUSY TO BE SAFE?



Also Inside: 2007 Innovation Awards and Best Safety Performers

WWW.WORKSAFELY.ORG



LIFE AFTER COR

by Holly Elke

For almost 20 years the Partnerships in Health and Safety program has actively encouraged employers and employees to internalize their responsibility for health and safety within their companies and organizations. The success of this program continues, so much so that having a Certificate of Recognition is now an integral part of conducting business in Alberta.

But how do you improve performance to exceed the basic expectations set by standards such as COR and ISO? How do you move from survival mode to world-class performance?

A company that wishes to proactively create change and evolve beyond compliance has several challenges to address. The first one is to recognize the symptoms of withdrawal, for example, apathy, avoidance and —worst of all—silence. The next challenge is to kick-start the evolution process, which requires a business strategy. The strategy I recommend is made up of cultural initiatives that create passion, manage perceptions and use emotional intelligence. It also includes process advancements that control the speed of change and evolution.

To help an organizational culture embrace change, and even demand progress, you will need to address the fundamental value of WIFM ("What's in it for me?"). Groups often perceive change as a bad thing and fear being asked to change, especially if they are not driving the change initiative. Typical methods of "selling" organizational change include perception surveys (give the people what they want), communication boards and newsletters, and personal meetings that encourage participation and involvement. These tools can promote the need for change and evolution, but they will not drive the group to demand change.

How do you improve performance to exceed the basic expectations set by standards such as COR and ISO?

To create a desire for change, organizations must focus on personal and visually appealing communications strategies. For example, an organization can increase trust and respect by focusing on and addressing the health and wellness issues that are affecting society. This in turn can lead to a desire for more information and participation in activities that support the management system. Finally, shifting towards positive goals and events (and away from end-of-the-pipe measurements such as the frequency and severity of incidents) will encourage people to experiment with new ideas and embrace the unknown.

The next challenge is sustainability. Like a train, the push towards change may be slow to start, but once people embrace and drive the evolution process, the demand for information and improvement accelerates. If the organizational infrastructure and processes cannot sustain the change process, the entire initiative will crash and burn, like a train that runs out of track. Many safety and quality professionals have encountered this "shooting star syndrome" when new programs or initiatives were introduced.

If you are trying to revitalize your system, maintain what you have already achieved or improve your performance to exceed minimum expectations, consider taking these steps:

- Plan and know what you want to do, so you don't run out of track.
- Communicate at all levels using emotional intelligence, not just emotions.
- Celebrate and focus on positive achievements, no matter how small.
- · Accept the reality of your resources and limitations.

Once upon a time, a man stepped onto a podium to address the most powerful nation in the world. With a speech that spanned less than 20 minutes, he convinced millions of people to commit to a 10-year goal by simply changing their perception from having to do it to choosing to do it. And the world watched a man walk on the moon.

This is a summary of a paper and presentation prepared by Holly C. Elke, CSP, CRSP, CMQOE, CHR, a senior QHSE advisor who owns and operates SH&E System Solutions in Calgary. For more details, go to www.she-solutions.ca.

The author extends special thanks to Chris Praestegaard at SDS Consulting Corporation for providing the inspiration for this project.

If you're interested in sharing opinions or comments about workplace health and safety issues, please get in touch with the editor through the Contact Centre, Workplace Health and Safety, 1-866-415-8690, whs@gov.ab.ca.

OCCUPATIONAL

HEALTH & SAFETY

September 2007, Volume 30, Number 3

Joe Childs Anita Jenkins Managing Editor Editor

Occupational Health & Safety is an Alberta Employment, Immigration and Industry publication. This magazine is published three times a year, in January, May and September. Magazine policy is guided by the Occupational Health & Safety magazine advisory board, which includes members representing both industry and government.

Membership on the Occupational Health & Safety magazine advisory board is open to any resident of Alberta with knowledge and experience in health and safety, and an interest in communicating health and safety information to the public. Anyone who is interested in joining the board should submit a letter of application to the managing editor of the magazine. The board meets three times a year in Edmonton. Board members do not receive remuneration or reimbursement for expenses related to meetings. See "Contacting the Editor," below.

Occupational Health & Safety Magazine Advisory Board

Joe Childs [Chair] Alberta Employment, Immigration and Industry,

Workplace Partnerships

Rick Ennis, CRSP Christensen & McLean Roofing Co.

Lloyd Harman, CRSP Enform

Barrie Harrison Alberta Employment, Immigration and Industry,

Communications

Mike Joyce Manufacturers' Health & Safety Association

Dianne Paulson Alberta Construction Safety Association

Cameron Mercer, C. Tech [IHT] Alberta Employment, Immigration and Industry,

Workplace Health & Safety

Kim Scott, CRSP, COHN [C] Venta Care Centre

James Wilson Workers' Compensation Board-Alberta

If there is a discrepancy between statements in this publication and the Occupational Health and Safety Act, Regulation or Code, the legislation takes precedence. Opinions expressed in this publication do not necessarily reflect the views or policy of Alberta Employment, Immigration and Industry or the Government of Alberta.

Copyright is held by the Government of Alberta. Reproduction of articles in their entirety is permitted. A reproduced article must include the author's name, title of the article; and the full name of the magazine with its date, volume and issue number. For permission to reproduce excerpts of an article, please contact the magazine's administration office.

The magazine is also available as a PDF file at http://industry.alberta.ca/whs-ohsmag.

Contacting the editor. We welcome response to articles or information published in this magazine, as well as suggestions for future articles. You can reach the editor through the Workplace Health & Safety Contact Centre, phone 1-866-415-8690, whs@gov.ab.ca.

Publication Mail Agreement No. 40062521

Return Undeliverable Canadian Addresses to:

Alberta Employment, Immigration and Industry Workplace Partnerships [Director's Office] 7th Floor, Labour Building 10808 - 99 Avenue, Edmonton, AB T5K 0G5

whs@gov.ab.ca

Proofreading by Deborah Lawson Design and layout by McRobbie Design Group Printing by Quebecor World Edmonton

ISSN 0705-6052 @ 2007

CONTENTS

PERSPECTIVE

| 2 | Life After COR

STORIES

| 8 | Too Busy to Be Safe

| 12 | 2007 Awards for Innovation in Workplace Health and Safety by Margaret Anne J. Taylor

| 16 | Boot Camps and Interactive Videos: | Innovative Training Programs | by Kerry Tremblay

| 20 | Mountaineers of the Industrial World

ERGOTIPS

| 11 | Putting the "I" in Ergonomics by Ray Cislo

MUCH MORE

| 4 | News & Notes

| 7 | Partnerships News

| 14 | Best Safety Performers 2007

| 18 | Web Watcher

| 18 | From the Courtroom

| 19 | The Last Resort

| 22 | Real World Solutions

|23| Fatalities

PHYSICAL ACTIVITY @ WORK BRINGING PHYSICAL ACTIVITY INTO THE WORKDAY

The Alberta Centre for Active Living has launched auser-friendly website to promote physical activity during the workday. Called Physical Activity @ Work, www.centre4activeliving.ca/workplace/, the site provides information about the health and bottom-line benefits of bringing physical activity into the workday as well as the safety and risk management issues involved. It also includes:

- a step-by-step guide to planning workplace physical activity
- practical suggestions for making physical activity possible in your workplace
- · success stories from Alberta companies
- tools, resources and research findings (for example, a personal Activity Tracker and videos entitled Yoga @ Your Desk and Stretching @ Your Desk)

The Alberta Centre for Active Living is a provincial, non-profit research and education centre affiliated with the Faculty of Physical Education and Recreation at the University of Alberta. The centre is supported by the Government of Alberta and the Alberta Sports, Recreation, Parks and Wildlife Foundation.



Photo courtesy of Alberta Centre for Active Living

Physical activity is good for business

Active employees can reduce your company's levels of absenteeism, injuries, turnover, disability compensation, and health-care and life insurance costs. Other benefits of introducing physical activity into the workday include:

- · improved job satisfaction
- · enhanced ability to cope with stress
- · improved alertness, reaction time and memory
- · higher productivity

6TH ANNUAL ALBERTA HEALTH & SAFETY CONFERENCE AND TRADE FAIR

Health Safety
Conference Society of Alberta

November 5-7, 2007 Telus Convention Centre, Calgary

This annual event provides support and information through educational sessions and exhibits of the latest health, safety and environmental products and services.

Highlights this year:

- For the first time, the conference will feature a technical stream on one topic—fall protection.
 Falls, an issue common to many industries, are one of the leading causes of injury in the workplace.
- Keynote addresses by Dr. Vincent Covello, Center for Risk Communication; Dr. Adam Moscovitch, Canadian Sleep Institute; and Brian Clarke, Hoffman Corporation.

For more information and registration details, visit www.hsconference.com, call (403) 236-2225 or send an e-mail to info@hsconference.com.

THREADS OF LIFE WORKPLACE TRAGEDY FAMILY SUPPORT ASSOCIATION

The thousands of Canadians who have been affected by a workplace tragedy need assistance such as grief counseling, support during workplace investigations and inquiries, and financial compensation. They also need a channel for communicating how important it is to prevent other Canadian families from experiencing the same pain and suffering.

Since 2002 the Threads of Life workplace tragedy family support association has been working hard to meet those needs, and is currently providing support to more than 400 families from across Canada. Activities of the Threads of Life association include:

- offering families the only one-on-one peer support program in the world delivered by trained Volunteer Family Guides (who have experienced their own workplace tragedy)
- working to create a cultural shift towards healthier and safer workplaces and communities across Canada—where injuries are not accepted as a cost of doing business

On November 6, 2007, Shirley Hickman, executive director and co-founder of Threads of Life, will be speaking at the 6th Annual Alberta Health & Safety Conference and Trade Fair in Calgary. (See information on the conference elsewhere in this issue.) Shirley experienced the loss of a family member in a workplace incident in 1996 and has coped with her personal tragedy by taking positive action.

For more information, go to www. threadsoflife.ca or contact Joe Childs, a member of the board of directors, at joe. childs@gov.ab.ca, phone (780) 415-0526.

WORKPLACE SAFETY FLOAT IN 2007 CALGARY STAMPEDE PARADE

For the first time ever, a float promoting safe workplaces was included in the July 6, 2007 Calgary Stampede Parade. The float, called "Work Safe for Life," was the result of a collaborative effort by industry members, provincial health and safety organizations (certifying partners) and Workplace Health & Safety (Alberta). It was also featured at Marlborough Mall during its Stampede Breakfast. To support this project, the organizing committee raised over \$11,000 and obtained contributions of time. materials and equipment valued at approximately \$50,000.



The supporting organizations for the Calgary Stampede float:

Ad Rem Safety Inc.

Agro Calgary

Avion Construction Ltd.

Calgary Exhibition & Stampede

City of Calgary

Cormode & Dickson Construction Limited

Elite RV and Trailers Ltd.

Enmax

Giusti Group of Companies

Head to Toe Safety Ltd.

Homes by Avi

K-Rite Construction Limited

Marlborough Mall

Qualico Group

Riverton Construction

Safety Tech

Scotia Bank

Singer Transport Limited

Star Building Materials

Steeplejack Services

Tenaris (formerly Prudential Steel)

Trico Homes

Western Electrical Management Limited

Alberta Association for Safety Partnerships

Alberta Construction Safety Association

Alberta Food Processors Association

Alberta Forest Products Association

Alberta Motor Transportation Association

Alberta Municipal Health and Safety
Association

Alberta Workplace Health & Safety

Canadian Society of Safety Engineering (Calgary Chapter)

Continuing Care Safety Association

Job Safety Skills Society

Manufacturers' Health and Safety Association

Western Wood Truss Association Alberta

Workers' Compensation Board-Alberta

OHS CODE PUBLIC CONSULTATION, FALL 2007

As part of its commitment to workplace health and safety, Alberta Employment, Immigration and Industry considers suggestions for changes to the Occupational Health and Safety Code every two years. The 2007-08 review is underway. Stakeholder working groups have been discussing the suggested changes (closing date: March 31, 2007), and during the fall of 2007 their draft recommendations will be posted on the WHS website, http://industry.alberta.ca/whs-codereview. You are invited to respond and comment.

For more information, contact Kenn Hample, P.Eng., Safety Specialist Coordinator, at (780) 415-0648 or kenn.hample@gov.ab.ca.

SEARCH AARC ONLINE TOOL

To quickly search or browse Alberta's Occupational Health and Safety Act. Regulation, Code and Code Explanation Guide, try SEARCH AARC. This easy-to-use online tool allows you to:

- · browse each of the four documents, page by page
- · jump to a specific part or section of each document
- · jump from one document to another
- jump between the Code and the Code Explanation Guide
- · search documents by keywords
- save documents to your clipboard for printing or e-mailing



Access SEARCH AARC at http://industry.alberta.ca/ whs-searchaarc.

NEW DIRECTOR OF COMPLIANCE

Eric Reitsma has been appointed Executive Director of Workplace Health and Safety and Employment Standards Compliance following Wally Baer's recent decision to take on the role of President and CEO of Enform. Eric began his career with the Alberta government in 1981, working in industrial hygiene. He has been the North Region Senior Manager for Workplace Health and Safety Compliance for the past ten years.

WORKPLACE HEALTH & SAFETY

Contact us any time

For occupational health and safety information and assistance, or to order Workplace Health & Safety publications, phone the Contact Centre at 1-866-415-8690 toll free in Alberta (415-8690 in Edmonton and area) or visit http://industry.alberta.ca/whs-contact.



Sign up for Workplace Health & Safety news To be notified by e-mail of all new Workplace Health & Safety website postings, sign up for a FREE subscription service through http://industry.alberta.ca/whs-subscribe.

Alberta Government Library -Labour Building Site

To review the large selection of occupational health and safety information materials available through the Alberta government, go to http://employment.alberta.ca/library.

To borrow materials, either contact your local library and make your requests through the inter-library loan system or visit the Alberta Government Library:

3rd floor, 10808 - 99 Avenue Edmonton, AB T5K 0G5

Library phone (780) 427-8533 Audio-Visual Services phone (780) 427-4671

To reach either of the above numbers toll-free in Alberta, dial 310-0000 followed by the area code and phone number.

Library fax [780] 422-0084

Workplace Health & Safety is an Alberta Employment, Immigration and Industry program that falls under the jurisdiction of Minister Iris Evans.

PARTNERSHIPS NEWS

REGIONAL PARTNER MEETINGS.

Most of the 66 Partners in Health and Safety attended one of the two half-day Regional Partner Meetings held in April (southern Alberta) and May (northern Alberta). Participants received news and updates from Workplace Health and Safety Compliance and the Workers' Compensation Board, including presentations on the Work Safe Passport for young workers and recent changes to the legislation. At the northern Alberta session, Dr. Louis Francescutti (www.drlou.ca) spoke about the dangers of using a cell phone while driving.

PIR EMPLOYERS EARN OVER \$73 MILLION IN REBATES

In April 2007, employers in the Partners in Injury Reduction program were awarded \$73.4 million in rebates for their success in 2006. Approximately 6300 Certificate of Recognition holders were registered in the Partners in Injury Reduction program for 2006. The total PIR refund for COR holders over the past seven years is just over \$316 million.

FRAUDULENT CERTIFICATES OF RECOGNITION

Employers issuing contracts or tenders are strongly encouraged to check the validity of any Certificates of Recognition submitted to them by going to the current list of CORs at http://employment.alberta.ca/documents/WHS/WHS-PS_COR.pdf. This list is updated weekly.

Two cases of fraud or tampering with CORs have been identified to date and are being investigated. In such cases, an employer's COR is cancelled (if it has not already expired) and the employer is suspended from participating in the Partnerships in Health and Safety Program for at least one year. Repeat offenders may be permanently suspended from the program.



Honourable Iris Evans, Minister of Employment, Immigration and Industry, and Guy Kerr, President/CEO, WCB-Alberta, at the 2006 PIR luncheon.

Photo courtesy of Workers' Compensation Board-Alberta



Partnerships in Health and Safety is a non-regulatory, province-wide injury prevention program sponsored cooperatively by government, labour and industry. The program offers:

- tools to implement a health and safety management system
- guidance in applying for a Certificate of Recognition (COR)
- potential for premium refunds from the Workers' Compensation Board-Alberta

For more information, call the Partnerships Hotline at 1-866-415-8690 or visit http://industry.alberta.ca/whs-partnerships.

TOO BUSY TO BE SAFE?

by Lee Craig

Albertans are known for being hard-working, especially during this time of fast-paced oil and gas fields and their economic spinoffs. But do they work harder and faster at the expense of safety?

A fall from a roof can have tragic consequences. A dropped pipe can result in months of missed work and rehabilitation. As well, an injured worker's employer is faced with the possible loss of business, increased WCB premiums and other economic consequences. In boom-time Alberta, industry and other businesses need all the workers they can get.

Contributing factors

"The demands of making sure workers are safe on a construction site, and in all industries in Alberta, are challenging," says Joe Shymanski, the safety officer at A. Clark Roofing and Siding, Ltd. "There's been a constant onslaught of work coming in the door, and that puts pressure on everyone."

Shymanski, who is a National Construction Safety Officer, points to several factors that can reduce safety on a busy construction site: the presence of many different trades and the weather, for example.

"You can never have 100 per cent safety because site conditions change, people change, the work changes—

it's a constant revolving door that presents big challenges," Shymanski savs.

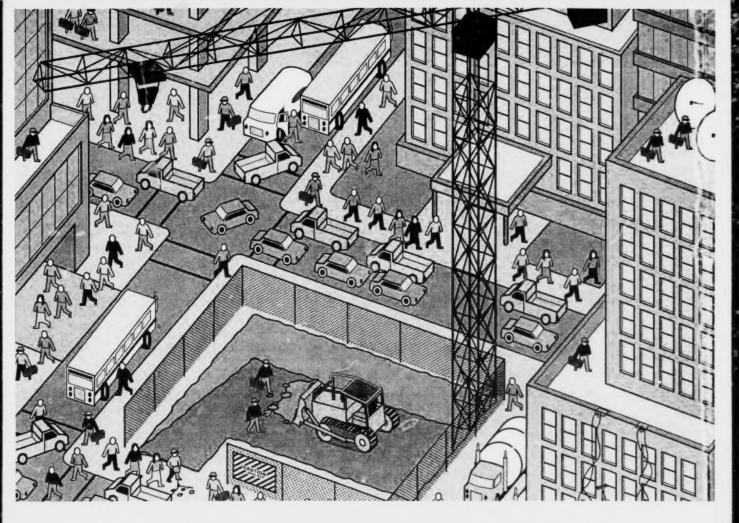
Shymanski believes that each industry has to focus on the key dangers in their field and work on the safety standards with their employees. Fall protection is his biggest challenge on the work site, mostly because of weather. "With snow and ice on the roof, it's like skating on the side of a mountain." A focus on using and inspecting fall protection systems can reduce injuries and deaths, Shymanski notes.

Patrick Delaney works for the Petroleum Services Association of Canada. In his industry, he says, one of the bigger challenges is looking to the safety of new workers.

"We know from statistics that new workers tend to be overly represented in injury claims. The green hands don't have the experience," says Delaney, who is the vice-president of health, safety, and government relations at PSAC. "As an industry we pay those workers special attention."

Delaney says companies try to ensure that new workers are paired with more experienced ones on the job sites. Green stickers, indicating new workers, are put on hard hats.

"The issue with the green stickers is that some people feel it singles them out. They don't want to wear the green hat.



Some companies insist on it and take the extra time to watch out for them."

"There's been a constant onslaught of work coming in the door, and that puts pressure on everyone."

How big is the problem?

In 2003, WCB accepted 39,100 lost time claims (a rate of 2.8 claims for every 100 workers covered by WCB). In 2006, lost time claims were at 38,500 (2.3 claims per 100 workers).

Kenn Hample, safety specialist coordinator at Workplace Health and Safety, says lost time claims, which are the measure the Alberta government uses to judge workplace safety, show that the workplace injury rate is declining despite the busy economy. (Lost time claims are made when an injury keeps a person from working for more than the day of the injury.)

"We know there is a tendency to want to get things done faster, and there may be pressures to do so that may lead to people forgetting about or purposely ignoring safety requirements. But we don't see anything developing as a trend," Hample says.

Gil McGowan, president of the Alberta Federation of Labour, challenges this statement. "The reality is that Alberta workplaces are now more dangerous than they have been in years," he says. "The bottom line is that as a result of a booming economy many employers are cutting corners in order to meet their deadlines. Unfortunately, one of the first corners to be cut is safety."

However, Delaney notes that it's in a company's best interests to pay attention to safety at all times. "Experience teaches us that the faster you go, the less safe you will be ... it's not just the loss of the worker, but there are huge financial implications for businesses that don't take safety seriously."

Advances have occurred, Hample says, noting in particular the 2004 Alberta Occupational Health and Safety Code. For example, Hample notes, "The technology for fall protection has just exploded. All kinds of devices are available now that we didn't have even 10 years ago." And, he says, there are also better systems for assessing hazards in the workplace, as employers are encouraged to develop health and safety systems.



"Our long-term trend analysis shows workplaces are becoming safer." says Barrie Harrison, public affairs officer, Alberta Employment. Industry and Immigration. "Lost time claim rates and fatality rates have been dropping consistently for the last 15 years. If anything, in this day of employers having difficulty retaining staff, health and safety is at the top of their priority list because they need them to come back to work tomorrow and next week and next month."

Are Alberta's workplaces too busy to be safe? Perhaps so, perhaps not. Hample observes that, despite the workplace safety rules the government brings in, safety in the workplace ultimately depends on what individual employers and employees do.

Lee Craig is an Edmonton freelance writer and editor.

RESOURCES

IN THE ALBERTA GOVERNMENT LIBRARY - LABOUR BUILDING

For contact information, see page 6.

VIDEOS

Stress and Safety

People often don't realize how stress can play a contributing role in incidents, injuries and near misses. This video provides tips and techniques for managing stress effectively to create a safer work environment. (VC 0294)

High Impact: Staying Alive in Industry

Eight incident re-enactments show how to use acquired knowledge and training as well as a good safety attitude and sound judgement to stay alive at work. Topics addressed include failing to concentrate, taking risks or shortcuts, making assumptions and neglecting to follow safe work practices. (VC 0335)

PUTTING THE "I" IN ERGONOMICS

by Ray Cislo

You've got it all. An ergo chair, ergo keyboard (your second one), ergo wrist rest, ergo matting, ergo handgrips on your tools, ergo mouse (your third one), ergo lighting, ergo voice recognition system, ergo knee pads and ergo document holder. You've purchased every possible solution there is, and your employer has done everything that can be reasonably expected. Yet you're still sore and uncomfortable.

It's human nature to look for a quick fix. Whether it's a pill or a new ergo device, we'll often try to buy our way out of a problem. But sometimes that "solution" is not effective at all, or it creates a host of secondary problems.

If you've exhausted all of the easy alternatives, you might be wondering what to do next. For a start, try to learn all you can and understand what's happening to your body. Going over all that ergonomics information about awkward body positions, repetitive movements and excessive forces can help you to see how these factors might be related to the symptoms and discomfort you're experiencing. The information you find may also reveal how or why all of those ergonomic aids haven't quite solved the problem.

Then step back and take a really honest look at yourself. Could you be taking better care of yourself physically? Would the pain and discomfort be lessened or made to disappear altogether if your muscles were stronger and your joints more flexible? Could your posture benefit from stronger core muscles (the muscles in the abdomen and lower back that support you while sitting and standing)?

It may be time to enroll in a Pilates or yoga class. Both are great for strengthening and conditioning the body. Get involved in your employer's wellness program. Incorporate physical activity into your everyday activities. Reach for the shoe laces rather than the car keys, walk at lunch with friends, take the stairs, manually open doors.

It generally takes about 21 days to change behaviour. And often a great deal of mental and emotional effort. So what will it take to get you there? For most people it will be the physical pain and discomfort that become intolerable and drive them to change. Once the back pain gets so bad, the wrists hurt so much, or the arms can't lift the son or daughter.

For others, behavioural change is driven from within. The goals and rewards may be very personal; the outward signs a level of fitness and function that help prevent pain and discomfort.

Whatever the cause or reason, stick with the fitness or wellness program. Take personal responsibility for your situation. How can you help yourself? You are the "I" in ergonomics.

Ray Cislo, P.Eng., B.Sc.(H.K.) is a safety engineering specialist at Alberta Employment, Immigration and Industry.

WEB LINKS

www.centre4activeliving.ca/workplace/beforestart/benefits_ whybeactive.html

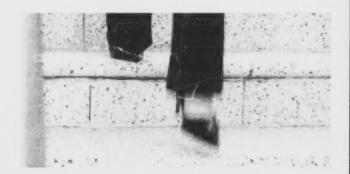
Physical Activity @ Work, Alberta Centre for Active Living

www.healthyalberta.com/AboutHealthyU/300.htm Healthy U @ Work

http://industry.alberta.ca/whs-publications. Click on Ergonomics. Workplace Health & Safety [Alberta] publications on ergonomics

Sills, Judith. The Comfort Trap or, What If You're Riding a Dead Horse? Penguin Group, 2004 www.judithsills.com/comfort trap excerpts.asp





2007 ANNUAL AWARDS FOR INNOVATION IN WORKPLACE HEALTH AND SAFETY

by Margaret Anne J. Taylor

After falling from a ladder, a worker lies unconscious at a remote hydro site in northern Alberta. No one else is around and she cannot call for help. Her communication system detects the movement of the generators in the building and does not call for help. What does she do?

A forklift suspends a pallet in the air at a manufacturing plant near Red Deer. Two workers pass a roll of plastic back and forth to wrap the product on the pallet. For a few seconds one of the workers stands directly underneath the pallet. If anything goes wrong, a serious incident could happen.

A service rig pulls up to a well in southern Alberta and starts to insert long tubing in a hole to carry gas or oil to the surface. The tubing catches on something and will be pulled apart if the person in control cannot react fast enough. This could result in damage to the equipment and possible injury to someone.

These are the kinds of situations that inspired the three winners of the 2007 Annual Awards for Innovation in Workplace Health and Safety to look for a better way of doing things.

Safety On Site Systems Man Down Solution Award of Merit, Mining and Petroleum Development "We all go to work so we can do things we enjoy after hours, such as horseback riding or skidooing," says BJ Fuchs, President of Safety On Site Systems Ltd. and inventor of the Man Down Solution. "There is no reason to put yourself at risk to get a job done. Work is supposed to be fun and safe."

The Safety On Site system uses the same satellite network as the US military to help individuals working in remote environments communicate with their employers. At the touch of a button, workers can trigger emergency response.

Using the Safety On Site system, a worker estimates how long it will take to get to a work site and punches in that information. Upon arriving, he lets the system know and then punches in how long a task is likely to take. If the

worker does not report in, the remote system reports back to the server and a pre-alarm is set off. If there is still no response, the system alerts the employer by e-mail or phone. Most other remote communication systems require the worker to physically push an alarm.

The Man Down Solution can also locate the worker, as it has a Global Positioning System tracking device—a system of satellites, computers and receivers used to determine the latitude and longitude of a receiver on earth by calculating the time difference for signals from different satellites to reach the receiver.

After two years of prototype testing and client feedback, the first production run came to fruition. Now forestry, mining and oil and gas companies in Alberta are using the Man Down Solution to help protect their workers.

"The last few years have been fun and exciting," says Fuchs. "It's also been a lot of hard work. More than 200 people worked on this project. It is very rewarding to be recognized."

Rappin Stik

Award of Distinction, Manufacturing and Processing Award winner Randy Watson, President of Bux Enterprises and inventor of The Rappin Stik, got the idea for his innovation on the job, while working in shipping. He invented the product to keep himself safe. But so many people were amazed at the simple solution that he finally decided to start a company and sell The Rappin Stik.

At a shipping company, two people are usually assigned to wrap plastic around products on a pallet. As the plastic needs to go around the product and the pallet in order to be secured, usually one employee ends up standing underneath a heavy suspended pallet passing plastic wrapping back up to a worker above. The plastic wrap is passed back and forth and back and forth until the product is wrapped. Incidents can happen if the product falls off of the pallet and hits the person standing below.

"I took a hockey stick and put a large plastic roll on it. It's a real Canadian invention," Watson says. The hockey stick acted as a handle so one worker could wrap everything on the pallet without assistance and also not stand underneath the load. "I replaced the hockey stick with welded pipe and used the innovation to wrap pallets up to 10 metres long by myself."

There's another reason why The Rappin Stik keeps Albertans safe. Often, items on pallets are plasticwrapped and then not secured to the pallet itself. During transportation on the highway or via forklift in the shop, the load can shift and fall off, injuring people. The Rappin Stik secures items directly to the pallet.

"A lot of people work in dangerous environments," Watson says. "I am a parent. I want to make sure that fathers and mothers go home to their children."

Programmable AC/Electric Service Rig Award of Distinction, Mining and Petroleum Development

A group of people from Nabors Production Services—a large global-wide company with its Canadian head office in Calgary and a division in Sylvan Lake—developed an automated service rig that uses a computer to carry out commands and thereby reduce human error. VP of Operations Darrell McIntyre says, "We have developed the industry's first programmable electric service rig. The electronic technology and motors allow for more precise and smoother operation, both on site and during transport."

During operation the computer controls speed and distance, and while moving the service rig, the electrical brakes provide a more controlled descent down steep hills. While a large drilling rig can take up to 100 trucks to transport, a smaller service rig can be moved in about three trucks.

With the new system. if tubing is being put in the ground, for example, and there is a seam every nine metres, a worker uses the computer to automatically slow the process down every nine metres and then speed up again. This reduces the chance of the tubing getting stuck at the more vulnerable spots. The height limiting feature eliminates the chance of the tubing being pulled too high and coming in contact with the top of the rig. The bottom limiting controls prevent the tubing from coming in contact with the bottom of the rig and the weight-limiting component ensures that the tubing is not pulled apart. These controls eliminate the chance of the tubing being dropped to the bottom of the well bore.

McIntyre says that when his service rigs and crews are hired by oil and gas companies, the number one thing they ask for is the safety record. Nabors has an incident record well below the average and this is an attractive asset. Also, updating equipment attracts new, younger workers who are computer savvy.

Tim Bennett, Chair of the Occupational Health and Safety Council, was part of the original group that started the Annual Awards for Innovation in Workplace Health and Safety. "We wanted to create an awards program that recognized truly innovative work in safety. We wanted it to be a prestigious, sought-after award. As a Council, we believe that there are many innovative ideas out there to reduce the impact of workplace injury and illness. We want to encourage these ideas to come forward and help promote these safety innovations to Alberta's employers."

Margaret Anne J. Taylor is a writer and media consultant with Preston Stuart Communications in Calgary.

HEALTH AND SAFETY AWARDS UPDATE

Work Safe Alberta is pleased to announce their sponsorship (through the Occupational Health and Safety Council) of the following two awards:

- · the Health and Safety Leader Award of Distinction
- the Health and Safety Improvement Award of Distinction

The criteria for these two awards, which were previously sponsored by the Workers' Compensation Board-Alberta, will remain essentially the same as last year, with only a few minor changes. Work Safe Alberta has sponsored the Awards for Innovation in Workplace Health and Safety through the Occupational Health and Safety Council since they were introduced four years ago.

The awards of distinction will continue to be presented at the annual Alberta Business Awards of Distinction gala celebration, a special event that the Alberta Chambers of Commerce has hosted for the past 16 years. For the first time, in February 2008, the Innovation Awards will also be presented at this event.

For more information, go to: http://industry.alberta.ca/whs-distinction and http://industry.alberta.ca/whs-innovation.



A tip of the hard hat to ALBERTA'S BEST SAFETY PERFORMERS.

LARGE COMPANIES 989804 Alberta Inc. Abalone Construction (Western) Inc. Agat Laboratories Ltd. Ainsworth Engineered Canada Ltd. Partnership Airborne Energy Solutions Ltd. Alberta Agriculture and Food Alberta Energy and Utilities Board Alberta Motor Association Albi Homes Ltd. All-Can Engineering & Surveys 1976 Ltd. Alliance Drilling Fluids Ltd. Alliance Pipeline Ltd. Partnership Altagas Utilities Inc. Ameco Services Inc. Apex Oilfield Services (2000) Inc. Aqua Terre Solutions Inc. Arcis Corporation Armor Machine & Manufacturing Ltd. ATCO Frontec Corp. ATCO Gas And Pipelines Ltd. ATCO Midstream Ltd. ATCO Power Canada Ltd. Athabaskan Resource Company Inc. B.F.L. Energy Services Ltd. Baker Hughes Canada Company Bakers Hughes Canada Beairsto Lehners Ketchum Engineering Ltd. Beattie Homes Ltd. Bel-Mk Engineering Ltd. Best Facilities Services Ltd. Big Horn Electric and Controls Ltd. Bowen Workforce Solutions Inc. Briarwood Daylighting Ltd Burlington Resources Canada Ltd. Calgary Health Region Canadian Energy Services LP Canetic Resources Inc. Canwest Propane Ltd. Capital Care Group Inc. Cardel Construction Ltd. CCS Inc. Cerpro Energy Services Inc. Challenger Geomatics Ltd. Charles Dei Construction Ltd. Cimarron Engineering Ltd. Clayburn Refractories Ltd.

Compass Directional Services Ltd. Compton Petroleum Corporation Compuvision Systems Inc. Construction Equipment Rentals Ltd. Contemporary Office Interiors Ltd. Contour Construction Ltd. County of St Paul No 19 County of Stettler No 6 County of Two Hills No 21 Criterion Catalysts & Technologies Canada Inc. Cyntech Corporation Cypress View Foundation D A Electric Ltd. D A Watt Consulting Group Ltd. Datalog Canada Ltd. Delta Helicopters Ltd. Delta Oilfield Controls (Rocky) Ltd. Design Group Staffing Inc. Devon ARL Corporation Devon Canada Corporation Diamond J. Industries Ltd. Diversity Technologies Corporation Dow Chemical Canada Inc. Dresser-Rand Canada, Inc. Dunvegan Inn and Suites Earthmaster Environmental Strategies Inc. East Central Health Elite Homes Ltd. Partnership Emerson Electric Canada Ltd. Enbridge Pipelines Inc. Encana Corporation Encana Services Ltd. Enerchem International Inc. **Enmax Corporation Enmax Energy Corporation** Epcor Utilities Inc. Eric Auger & Sons Contracting Ltd. Flint Integrated Services Inc. Fluor Canada Ltd. General Electric Canada Inc. & General Electric Gibson Energy Marketing Ltd. Gibson Energy Marketing Ltd. & Gibson Energy Ltd. Global Thermoelectric Inc. Government of Alberta Graham Group Ltd. Graham Industrial Services Ltd. Grant Energy Maintenance Greenboro Homes Ltd. Partnership Head Construction Ltd. High Time Industries Ltd. Hinz Automation Inc.

Honeywell Ltd. Hood Resources Corporation Hunt Oil Company of Canada Inc. I.G. Machine & Fibers Ltd. Ideal Contract Services Ltd. Imperial Oil Ltd. Industrial Paramedic Services Ltd. Innovative Chemical Technologies Canada Ltd. Integrity Reclamation Seismic Services Inc. Interbase Consultants Ltd. International Painting & Drywall Ltd. J & L Supply Co Ltd. J.V. Driver Projects Inc. Jacobs Canada Inc. Johns Manville Canada Inc. K & C Oilfield Hauling Ltd. Kiewit Energy Canada Corp. Klassen Brothers Northern Ltd. Lacombe County Landmark Homes (Edmonton) Inc. Ledcor Management Ltd. Legal Alfalfa Products Ltd. Lockerbie & Hole Management Corp. M Pidherney's Trucking Ltd. M.E. Singer Enterprises Ltd. Macro Industries Inc. Marquis Fluids Inc. Maxxam Analytics Inc Melloy Industrial Services Inc. M-I Drilling Fluids Canada Inc. Millennium Ems Solutions Ltd. MM Ltd. Partnership Morrison Construction (1983) Ltd. Morrison Hershfield Ltd. Morrow Environmental Consultants Inc. MPE Engineering Ltd. Municipal District of Foothills No 31 Mystique Mechanical Ltd. Netook Construction Ltd Newpark Canada Inc. Newsco Directional & Horizontal Drilling Svcs Inc. Nilex Inc. North Star Transport Ltd. Northern Truck Services 1994 Ltd. Northrock Resources Ltd. Nova Chemicals Corporation O'Connor Associates Environmental Inc. On Site Advanced Medical Services Inc. Pacesetter Homes Ltd. Pason Systems Corporation PCL Construction Mngmnt Inc. & Maxam Contr Ltd.

worksafely.org 415-8690 (Edmonton area) 1-866-415-8690 (toll-free outside Edmonton)

Colt Engineering Corporation

Colt Geomatic Solutions Ltd.

Communications Group (Fort McMurray) Ltd.

Communications Group Red Deer Ltd.

Work Safe Alberta is a joint industry, labour and government initiative to promote workplace health and safety awareness and education. We're proud to honour these safety leaders for 2006.

PII (Canada) Ltd. & GE Oil & Gas Nova Scotia Pioneer Land Services Ltd. Pioneer Natural Resources Canada Inc. Pitney Bowes Management Services Inc. PMC (Nova Scotia) Company Powercomm Inc Prairie Mines and Royalty Ltd. Prairie North Construction Ltd. Pratt & Whitney Canada Corporation Precision Drilling Corporation Primewest Energy Inc. Pronghorn Controls Ltd. Q'max Solutions Inc. Quality Electric & Motor Sales Inc. Raymac Surveys Ltd. Read Jones Christoffersen Ltd. Reflex Manufacturing Ltd. Reid Built Homes Ltd. Reliance Resources Group Canada Inc. Respec Oilfield Services Ltd. Ricks Oilfield Hauling Rife Resources Ltd. River City Electric Inc. RPS Energy Canada Ltd. RTD Quality Services Inc. Saddle Hills County Salisbury Landscaping Schenley Distilleries Inc./Les Distillateurs Schlumberger Canada Ltd. Schneider Canada Inc. Scientific Drilling International (Canada) Inc. Servpro Cleaning (Calgary) Inc. Shane Homes Ltd. Shell Canada Ltd. Siemens Building Technologies Ltd. SIL Industrial Minerals Smurfit-Mbi SNC-Lavalin Inc. Sobeys Western Cellars Inc. Sterling Homes (Edmonton) Ltd. Sulzer Metco (Canada) Inc.

Techmation Electric & Controls Ltd. Tera Environmental Consultants The Calgary Airport Authority Tirecraft Auto Centers Ltd. Town of Cochrane Town of Vegreville Triton Projects Inc. Tuc's Contracting Ltd. Urban Systems Ltd. Usw Surveys Fm Ltd. Velocity Express Canada Ltd. Waiward Steel Fabricators Ltd. Weir Canada Inc Western Energy Services Corp. Western Inspection Ltd. Weyerhaeuser Company Ltd. Weyerhaeuser Company Ltd./Brodleaf Wolseley Canada Inc.

SMALL COMPANIES

AAA Alarm Systems Ltd. Abitibi Helicopters Ltd. Adco Power Ltd. Alberta Exchanger Ltd. Alberta Hotel & Lodging Association Al-Terra Engineering Ltd. Am Inspection Ltd. Ara Engineering Ltd. Bird Construction Company Car-Ber Testing Alberta Inc. Chief Construction Company Ltd. Concours Collision Centres Ltd. Crossland Transport Inc. Crystal Drywall Inc. D.J. Catering Ltd. DMI Services Ltd. Downton's Transport Ltd. Earth & Iron Inc. ESC Automation Inc. Foothills Steel Foundry Ltd. Gift Lake Metis Settlement Global Energy Services Ltd.

Hitech Fluid Systems Ltd. J.T. Setters & Sons Construction Ltd. Keyera Energy Management Ltd. Kran Construction Ltd. Lennox Canada Inc Logic Lumber (Leth.) Ltd. Lydell Logging Ltd. Macmillan Construction Ltd. Marcal Energy Ltd. Mec Mclennan Engineering Contracting Ltd. Mitcham Canada Ltd. Monarch Transport (1975) Ltd. North American Construction Group Inc. North Eight Contracting Ltd. Pajak Engineering Ltd. Park Ambulance Service Ltd. PCL Construction Resources Inc. PHH Arc Environmental Ltd. Platinum Energy Services (Lloydminster) Corp. Pulse Data Inc. Rae Engineering and Inspection Ltd. RKM Contracting Ltd. Rocky Mountain Valve Services Ltd. Sabine Co2 Logistics Inc. Seacor Environmental Inc. Seko Construction Ltd. Sharp Environmental (2000) Ltd. SIL Industrial Minerals Sonny's Trucking Ltd. Strathcona Mechanical Ltd. Terroza Exploration Services Inc. Thermal Systems Kwc Ltd. Three Sisters Mountain Village Ltd. Today's Homes Ltd. Partnership Town of Athabasca Trimac Management Services Ltd. Partnership Trotter & Morton Facility Services Inc. Trotter and Morton Ltd. Tru-West Company Ltd. Weir Construction Ltd. Westcan Tel Ltd. Whissell Engineering Ltd.



Sword Energy Inc.

Superheat FGH Canada Inc.

BUILDING A STRONGER ALBERTA.

For more information about how to qualify as a Best Safety Performer, visit worksafely.org and click on Workplace Health and Safety.



BOOT CAMPS AND INTERACTIVE VIDEOS:

INNOVATIVE TRAINING PROGRAMS

by Kerry Tremblay

Recognizing that most employers want to hire people who can hit the decks running, two Alberta companies have developed effective new ways to train workers who find traditional classroom learning a challenge.

Women Building Futures

The not-for-profit association Women Building Futures, www.womenbuildingfutures.com, takes a very personal and hands-on training approach with carefully screened women who wish to enter the construction trades. According to Program Coordinator Chrystia Chomiak, their 60 clients per year usually have low incomes and are often single parents. So it's a complex proposition to get them set up to succeed in a trade apprenticeship.

Workers need to learn how to recognize a hazard, understand the defence and act in time. But danger doesn't recognize inexperience.

The strength of the Women Building Futures program, Chomiak says, is that "It gets women ready for work on a construction site. From day two of the program, the women are in their work boots, so they can get comfortable in them. We cover what kind socks they need. We introduce issues like how to handle bathroom breaks in a male-dominated workplace and even what kind of snacks to bring, so that they have the energy to do a full day's work." All of those issues, minor as they may seem, can be dangerous distractions on the work site. Thinking about them in advance makes the transition easier.

During the 14-week training process the women enter a pre-trades program that includes everything from how to buy those safety boots to where to find tools that fit a woman's potentially smaller hand. By the end of the program each woman has completed aptitude tests, participated in a sort of "boot camp" and completed the Alberta Apprenticeship Entrance Exam. Once a woman is accepted into the program, says Chomiak, "Nobody quits."

"Safety is a very important part of our program." Chomiak adds. "Before every class, we look at what the workers



Alayna, a Women Building Futures grad, is now a journeyman welder.
Photo courtesy of Women Building Futures.

are up against, and what personal protective equipment is required." That way, on-the-job situations are not a surprise. The women have already been primed to think about how they can tackle tasks safely and effectively.

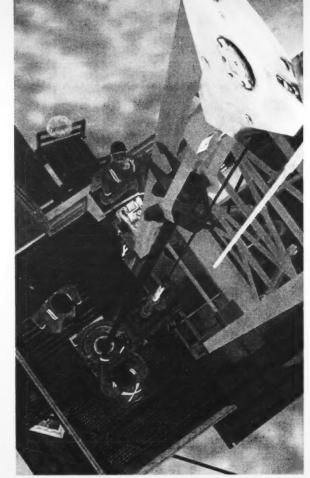
Each student gets some eye-opening, hands-on training on topics like fall protection, forklift operation, scaffold awareness and H₂S Alive, as well as the more the prosaic, but mandatory, programs: WHMIS, first aid and the computer-based Construction Safety Training System.

Chief Executive Officer JudyLynn Archer says Women Building Futures works with its clients and the companies that hire them for five years. "The support we provide is critical," she says. It means that, for example, if a single mother's childcare provisions fall apart, we will help sort through the issue with the employer."

"The key to success." says Archer, "is that each of our students has a focus and a commitment to being a great apprentice."

Terris Hill Productions

At Terris-Hill Productions Ltd., www.terris-hill.com, partners Terry Smith and Kevin McNulty have spent the last two



Rig Skills Simulux video image.
Photo courtesy of Terris-Hill Productions Ltd.

years and \$3 million developing the first animated interactive training video for junior service rig personnel in the oil patch. Their product, Rig Skills Simulynx, is sold to companies that run the service rigs to give junior floorhands some competency on the rigs before they even set foot on one. The target audience, says Smith, is "18 to 24-year-old males who grew up playing computer games." The 3-D training program is one of the first in the oil patch to use what the computer gaming industry calls "serious gaming."

Simulynx is an accurate and visually appealing computer learning tool for a sector of the oil industry that is plagued by high turnover, few training options and high injury rates. Partner Terry Smith says Simulynx has key learning areas divided into chapters that cover topics ranging from transporting the rig to basic equipment operations. In a section of each chapter the student is coached through the procedure as many times as he wants, and then tested on the procedure. A student can't proceed to the next section until he gets 100 per cent on the current section. "That makes it measurable and auditable," says Smith.

Smith's partner. Kevin McNulty, says that Simulynx will give the industry and the young new hires consistent training that can be brought "from rig to rig to rig," as they change positions, rigs and companies during their careers. This training program, linked up to further training and testing on

the rig itself, is now a key part of a NAIT certificate. Up until now, there has been little standardized training. Rig hands have traditionally learned on the job, often under severe pressure of time, bad weather and short-handed work sites.

While the technology is new, similar ideas have been used for years with flight simulators. The US government recruits people into the army using serious gaming technology, and the United Nations is using similar technology to teach people how to distribute food in emergency situations.

"We visualize the day when learning is not viewed as a chore but as a form or entertainment," says Smith. Through the computer screen, the young employee can see what is happening on the rig and figure out what to do, guided by the voice of a coach. The student manipulates whatever tool he's working with, using a computer mouse and a couple of keys on the keyboard.

For example, in one of the scenarios a senior floorhand is using tubing tongs, which are like wrenches that screw pipes together hydraulically. They are operated by a series of levers, used in a specific sequence, in a particular direction. If the floorhand moves the lever in the wrong direction, it's dangerous, and the coach tells the student it's wrong, then repeats how to do it correctly. A student can move the tongs on the screen, using the levers that are set out just the way they would be on a working rig. They experience the rig and learn how the pieces work without being exposed to danger.

"Symulynx is very task-specific," says Smith, "We built 57 very specific work methods from a risk management perspective." Each of the tasks within a work method was broken down, and then analyzed to see how to perform the task exactly right. All that expertise is captured and put into a package that appeals to young adults who grew up playing and learning on computers.

Workers need to learn how to recognize a hazard, understand the defence and act in time. But danger doesn't recognize inexperience. It lurks on every job site where physical labour and machinery mix. Recognizing risks and knowing how to do a job safely and competently is tough for everyone, and especially for those who are young or inexperienced.

For more information

Workplace Health & Safety (Alberta) also has several innovative e-learning programs available at http://industry. alberta.ca/whs-elearning. (See the Web Watcher column http://industry.alberta.ca/whs-elearning http://industry. alberta.ca/whs-elearning in this issue, page 18.)

Kerry Tremblay is a Calgary freelance writer specializing in safety and training.



INTERNET-BASED PROGRAMS SERVE A REAL NEED



EBSWORTH V. HER MAJESTY THE QUEEN

Defence lawyers' attendance at witness interviews

by Bob Christie

While it doesn't happen often, there really IS the occasional free lunch. Workplace Health & Safety (Alberta) offers these free Internet-based safety awareness programs on their website, http://industry.alberta.ca/whs-elearning:

- · Alberta OHS Legislation Awareness
- · Hazard Assessment and Control
- · Recognizing Workplace Hazards
- · Shiftwork and Fatigue
- · Incident Investigation
- · Fun Quizzes
- · Workplace Health and Safety for Schools
- · Impairment and Workplace Health and Safety
- · Backs and Bums: Applying Basic Ergonomics.

And the WHS team is planning to produce still more. Since the packages are free, of short duration and easy to access, they are almost guaranteed to have a positive effect on any bottom line. Every incident costs money, so a reduction in incidents with virtually no cost outlay cannot be a bad idea.

If you want to make one of these programs part of your internal training system, you can download them or get most of them for free on a CD-ROM. I am told that a source code is even available for the ambitious and technically savvy.

Something for nothing is rare enough, but even more so when that something is carefully prepared to serve a real need. I really want to give the folks in charge the credit they deserve. So after you go to the site, see the programs and use them with your workforce, take a few minutes to fill out their feedback survey. We should be encouraging this kind of really fine work.

Bob Christie, a partner at Christie Communications Ltd., supplies most of the web link resources for the articles in this magazine.

by Tamara Trull

Occupational health and safety investigators used to allow lawyers to attend witness interviews following a workplace incident. However, Workplace Health & Safety's ability to investigate matters became impaired due to the growing uncooperativeness or unavailability of defence counsel.

There is no right to counsel, and since any statement given by a witness cannot be used in evidence to prove they violated the legislation, a policy was implemented whereby witnesses were no longer extended the courtesy of having counsel present. Witnesses were, however, given the opportunity to consult with a lawyer, if they wished, but outside the interview proper.

A defence lawyer challenged Alberta Justice's position that the right to have counsel present during the interview of a witness is not provided in the statute or in the Constitution. The Court, agreeing with Alberta Justice's position, found that the new WHS policy is consistent with the regulatory legislation and does not in any way violate anyone's Charter rights.

By upholding the position, the Albert Court of Appeal, the highest court in the province, has affirmed that the legislative scheme appropriately balances the interests of all affected parties, and that investigative and prosecutorial discretion is exercised fairly.

The objective is to utilize prosecutions as a last resort to ensure compliance with minimum legislative standards and thus lead toward safer work sites.

To suggest topics for future columns, please send a message to Tamara.Trull@gov.ab.ca or Brian.Caruk@gov.ab.ca.

Tamara Trull is a Crown Prosecutor in the Aegulatory Unit of Alberta Justice.

THE LAST RESORT

Reporting on Recent Convictions
Under the Occupational Health and Safety Act

Employer

Steve's Oilfield

Incident

On March 16, 2003, two workers were splash loading a highly volatile product into a storage tank when vapours coming off the tank were pulled into the air intake of a running internal combustion engine.

Violation

On February 12, 2006, Steve's Oilfield pleaded guilty to failing to ensure that machinery was serviced, adjusted, maintained or repaired in accordance with the manufacturer's specifications [section 34(1)[d], Alberta Regulation 448/83, General Safety Regulation].

Fine

Steve's Oilfield received a total penalty of \$100,750: a fine of \$5,000 plus a \$750 victim fine surcharge; and a payment of \$95,000 to STARS Air Ambulance.

Employer

Gene's Oilfield Services Ltd

Incident

On September 23, 2003, two workers flushed the storage tank of a tanker truck with water. While one worker was looking into the storage tank using a hand-held electric light, a fire and explosion occurred. Both workers were seriously injured.

Violation

On April 20, 2007, Gene's Oilfield Services Ltd. pleaded guilty to failing to ensure the health and safety of workers [section 2(1)(a)[i), Occupational Health and Safety Act].

Fine

Gene's Oilfield Services Ltd. received a total penalty of \$75,750: a fine of \$5,000 plus a \$750 victim fine surcharge; and a payment of \$70,000 to St. John Ambulance over a four-year period.

Employer

315378 Alberta Ltd., operating as Dial Oilfield Services

Incident

On March 16, 2003, two workers were seriously burned while offloading condensate from a truck's cargo tank to an 1,892-litre storage tank.

Violation

On May 25, 2007, Dial Oilfield Services was charged with allowing hot work to be performed in a location where a flammable substance is or may be in the atmosphere or handled [section 185 [2](a), Alberta Regulation 448/83, General Safety Regulation].

Fine

Dial Oilfield received a total penalty of \$100,750: a fine of \$5,000 plus a \$750 victim fine surcharge; and a payment of \$95,000 to be paid to STARS Air Ambulance.

Employer

1044256 Alberta Ltd., operating as DJZ's Welding

Incident

On September 19, 2003, a worker was seriously injured in an explosion inside a tank he was working in. The worker was using welding equipment and was not aware he was working in close proximity to an explosive atmosphere. The worker died from his injuries on September 23, 2003.

Violation

On May 2, 2007, DJZ's Welding pleaded guilty to allowing hot work to be performed in a location where a flammable substance is or may be in the atmosphere or handled [section 185 (2)(a), Alberta Regulation 448/83, General Safety Regulation].

Fine

DJZ's Welding received a total penalty of \$350,000, including a victim fine surcharge.

For more information go to http://industry.alberta.ca/whs-prosecutions.

MOUNTAINEERS OF THE INDUSTRIAL WORLD

by Bill Corbett

A common perception is that the use of ropes to go up, down or across steep terrain is inherently dangerous. So it may be surprising to know that ropes properly used in an industrial setting can often be the safest, fastest and most cost-effective means of working at height.

Now, Alberta's legislation has caught up to that reality. As of February 1, 2007, requirements for occupational rope access have been added to the province's Occupational Health and Safety Code (Part 41). The detailed rules cover everything from proper rope access techniques and equipment to training and competency requirements in both industrial and non-industrial settings.

"Alberta is the second jurisdiction in North America (California is the other) to include rope access in its health and safety code," says Jason Laurie, technical director of Calgary-based Vertigo-Solutions for Work at Height, who helped draft the new rules. "Our document is unique in that it is quite detailed and it has teeth."

Why use rope access?

Rope access is the use of specialized rope techniques to place workers in hard-to-reach locations in vertical environments. It combines industrial rigging and rock climbing techniques and equipment to produce a lightweight, mobile and flexible means of accessing these locations. "Rope access technicians are the mountaineers of the industrial world," says Ray Cislo, a safety engineering specialist with Workplace Health & Safety (Alberta).

Rope access is often a good alternative to scaffolds, lifts and other elevated platforms when performing tasks such as inspections, maintenance and non-destructive testing of vertical facilities. "A lot of this work was traditionally serviced by scaffolding." Laurie says. "But scaffolding might take a number of workers a couple of weeks to erect, work from and dismantle. With rope access, you can do the same thing with a couple of workers in a few days for a fraction of the cost."

Not surprisingly, rope access is increasingly being used in Alberta's booming oil and gas, pulp and paper, petrochemical, geotechnical and other industrial sectors. For example, roped workers can move safely and freely along the sides of a steep structure that needs caulking or painting. They can also be easily lowered from anchors to inspect the inside of a sphere

that would otherwise be difficult, expensive and perhaps more dangerous to reach.

"Over the last three years the work here has quadrupled," says Yonni Wall, operations manager for the Calgary office of Remote Access Technology International. "Awareness of what rope access is and how it can be used is a lot higher than it used to be."

"Alberta is the second jurisdiction in North America (California is the other) to include rope access in its health and safety code."

Rock climbers have long used ropes to secure their way over steep terrain, and industrial rigging systems are standard practice, primarily for fall protection. But lightweight industrial rope access techniques didn't emerge until about the mid-1980s, when they were developed to inspect and maintain the steep, exposed undersides of offshore petroleum drilling platforms in the North Sea.

These techniques eventually migrated to North America. "We adapted rope access techniques because they're safer, faster, lighter and more efficient," says Dave West, president of Canmore-based Vertical Systems International, and an industrial and mountain rescue specialist for 16 years. "Rope access has definitely made construction and maintenance at heights safer. With conventional fall arrest systems, you can fall. With rope access techniques, you can't fall." (One foreign rope access association has recorded 10 million hours of operation without a fatality.)

Getting the regulations up to speed

Still, early rope access practitioners here faced two big challenges: one was industry ignorance and the other was regulations designed for industrial fall protection that didn't fit these new practices. "In the past, rope access was perceived as a dangerous job," says Wall. "People didn't really understand what it was."

West remembers a safety official at an oil company telling him, a few years ago, that a rock-climbing helmet worn by a rope access worker on a job site wouldn't meet Alberta's OHS code standards—even though it was safer in that application than a standard work helmet. The provincial regulations also didn't allow workers to rappel or ascend, or to use some rope access techniques.

At the same time, many well-qualified and highly trained mountain and caving guides were likely unaware that their practices also didn't adhere to the OHS fall protection rules, which were designed for industrial applications but still governed these guides. "A lot of these people were operating under the radar," says Cislo.

These realizations prompted Alberta's fledgling rope access industry to push for Code rules designed specifically for them. Over a couple of years, a government-industry-worker committee crafted nine pages of rules supplemented by a 40-page document that explains the occupational rope access requirements for industrial and non-industrial applications.

The section on non-industrial applications covers climbing/mountaineering and caving guides and climbing wall operators, who typically use single-rope systems and sit harnesses. (Industrial operators use beefier, two-rope systems and full-body harnesses.) "The new regulations have provisions specific to activities our guides undertake, which is good because the old fall protection guidelines definitely handcuffed them," says Peter Tucker, executive director of the Association of Canadian Mountain Guides.

The new rules outline acceptable practices, equipment and rescue methods for occupational rope access work. They require employers to develop safe work plans and, when doing so, to choose one of three recognized guidelines used in the United Kingdom, Australia and the United States, respectively. While certification is not currently required, a high level of competency is required for this demanding work (see sidebar). "A very high degree of skill and training goes into becoming a rope access technician," West says.

In addition to doing rope access jobs themselves. Alberta's fledgling industry offers clients training courses, supervision, equipment and the development of safety plans. For example, an electrician working at a natural gas plant could be trained to perform rope access jobs, under supervision, on steep structures.

Industry practitioners are hoping the new rules will give rope access a higher profile in Alberta and help educate potential clients, as some are still skeptical about its safety and efficiency. "Putting rope access into the Occupational Health and Safety Code gives this work more credibility," says Laurie. "What makes industrial rope access so safe is that our expectations are greater than those of our clients."

For more information

Part 41 of the OHS Code, Work Requiring Rope Access, is available at http://industry.alberta.ca/documents/WHS/WHS-LEG_ohsc_2006_p41.pdf.

Bill Corbett, a Calgary freelance writer (www.billcorbett. ca), is the author of 11,000ers of the Canadian Rockies (Rocky Mountain Books).



Rope access worker inspecting an ultrasonic weld Photo courtesy of Vertical Systems International

ROPE ACCESS COMPETENCY LEVELS

The OHS Code identifies three levels of rope access competency:

- workers who have taken a five-day course and passed an exam (They must still be supervised when doing rope access work.)
- workers who have taken an additional training course and have logged 1,000 hours of experience at height
- workers who have an additional 1,000 hours of experience and more training (They can supervise rope access work.)

RESOURCES

WEB LINKS

www.sprat.org/ Society of Professional Rope Access Technicians

www.sprat.org/safeuse.pdf
Safe Practices for Rope Access Work

WHAT IMPROVEMENTS HAVE YOU MADE AT YOUR WORKPLACE?

If you've found a solution worth sharing, please send it to ray.cislo@gov.ab.ca.

SCREENS TO SUPPORT WEIGHT WHILE POURING

The Problem

Workers can sustain back and shoulder injuries as they struggle to maintain control while emptying heavy and slippery bags of flour, sand or similar materials. This task is difficult because the bag changes shape as the contents flow out.



The Solution

A screen placed over the receptacle supports the weight of the bag as the contents stream through the screen.

Benefits

The potential for injury is eliminated because the worker doesn't have to hold and steady the bag while it empties.

HAND TRUCK WITH BRAKES

The Problem

Workers can injure themselves or others while struggling to maintain control of heavily loaded hand trucks on down ramps and stairways.

The Solution

A hand truck equipped with brakes provides greater control.

Benefits

The potential for injury is greatly reduced because the worker doesn't have to struggle to keep the hand cart steady.



IN THE NEXT ISSUE ...

Watch for these two articles coming up in the January 2008 issue of Occupational Health & Safety.

LOW-LEVEL WORKPLACE CONFLICT (IT'S NOT SOMETHING YOU CAN IGNORE)

Conflict that may at first appear trivial has the potential to cause even more serious issues than staff turnover and lost productivity.

11 EARLY Warning Signs of Workplace Conflict

- · People aren't performing.
- · People are disengaging.
- · People are leaving.
- · People are off sick.
- · People are breaking the rules.
- People aren't working cooperatively.
- · People are talking disrespectfully.
- People are gossiping about each other.
- People are excluding each other.
- People are laying formal complaints.
- People's behaviours are escalating.

Source: ProActive ReSolutions Inc., www.proactive-resolutions.com

COMMUNICATING IN A CRISIS

How do you appropriately deal with workers and their families after a serious workplace incident? Threads of Life founder Shirley Hickman has these suggestions:

- Establish a communication link with the family as soon as possible.
- · Build compassion into crisis communications.
- · Manage the flow of information.
- After the crisis passes, establish a legacy such as a scholarship named after a deceased worker.

WORKPLACE FATALITIES

Investigated in Alberta

May 10 - June 22, 2007

Most work-related incident fatalities that fall under provincial jurisdiction are investigated by Workplace Health & Safety. In general, highway traffic, farm, disease or heart attack fatalities are not investigated.

In many cases, investigation into these fatalities is continuing. Final investigation reports are filed at the Alberta Government Library - Labour Building site and can be reviewed there or at http://industry.alberta.ca/whs-fatalities.

From January to June 2007, Workplace Health & Safety investigated 18 workplace incidents, the same number as investigated in 2006 over the same time period. For further information about comparing trends in fatalities over time, please see the Occupational Fatalities in Alberta report:

http://industry.alberta.ca/documents/WHS/WHS-PUB 10yr fatal.pdf.

A 54-year-old restaurant worker who was carrying several trays tripped over a case of milk left on the floor of a food service area. She fractured her leg and died in hospital about five weeks later.

A 33-year-old electrician and a 27-year-old scaffolder died when the roof they were putting on a large oil storage tank came down on top of them.

A 39-year-old rigger was killed when a grass hopper arm became dislodged from the doghouse and fell on him. A team of workers had used a crane to lift a grass hopper arm in a rigging sling and attach it to the doghouse. When the crane operator started to remove the sling after it had been unhooked, it caught on the grass hopper arm and caused it to fall.

A 42-year-old pipe layer was killed in a motor vehicle incident on a haul road. The vehicle he was driving flipped over and landed on its roof in the river when the worker tried to avoid a collision with an oncoming log truck at a single-lane bridge. The worker was partially ejected from the vehicle and his head struck a rock on the riverbank.

A 31-year-old medic was killed when pinned between a pup attached to a tank truck and another piece of equipment. The medic was guiding the truck driver, who was backing up.

A 22-year-old labourer was fatally injured when he became entangled in the tail pulley of a gravel crusher. The worker was attempting to do routine maintenance on a conveyor belt running over the tail pulley.

A 33-year old labourer died after being driven over by a gravel truck that had been stuck in the mud at a residential construction site. The driver did not see the worker, who was apparently removing a towing strap from the front of the truck.

A 64-year-old worker was fatally injured when he was pulled into a conveyor for a compost machine. The worker's clothing was caught on the sprocket of an unguarded roller.

A 46-year-old boilerman who was working the night shift alone was found unconscious when the day shift workers arrived.

A 41-year-old journeyman power lineman died from an electrical shock. A "digger derrick" had been raised and had come into contact with a live 8,000-volt overhead power line. The worker, who was on the ground, came into contact with the truck and was electrocuted.

A 67-year-old driver was securing load straps on a vehicle when one strap became stuck on top of the load. Another worker later found the driver unconscious on the ground: he had apparently fallen after climbing up on top of the load to clear the strap. The driver died about 10 days later.

Return Undeliverable Canadian Addresses to: CIRCULATION DEPARTMENT

Alberta Employment, Immigration and Industry

Workplace Partnerships (Director's Office) 7th Floor, Labour Building

10808 - 99 Avenue, Edmonton, AB T5K 0G5 E-mail whs@gov.ab.ca

Publications Mail Agreement Number 40062521 ISSN 0705-6052 © 2007

6th Annual Alberta Health & Safety Conference and Trade Fair Providing Solutions for a Safer Workplace

Telus Convention Centre Calgary November 5 to 7, 2007

www.hsconference.com



